AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application:

The Claims:

1. (Previously Presented) A system for producing a quantitative indicator that measures a response of a subject's blood circulation system ~~assessing a response of blood circulation in a limb of a subject~~ to postural change, comprising:

pre-processing circuitry configured to detect a signal dependent upon an arterial blood volume in the limb of the subject when the subject is in a first posture and ~~also when the subject is in~~ configured to detect the signal dependent upon the arterial blood volume in the limb of the subject responsive to a change in the subject's posture from the first posture to a second posture, different to the first posture; and

processing circuitry configured to calculate a quantitative indicator that measures a response of the subject's blood circulation system to postural change and is dependent upon a ratio of the detected signal for the first posture prior to the postural change to the detected signal for the second posture after the postural change and during a response of the subject's blood circulation system to the postural change.

2. (Previously Presented) A system as claimed in claim 1, wherein the quantitative indicator is directly proportional to the ratio of the signal for the first posture to the signal for the second posture.

3. (Previously Presented) A system as claimed in claim 1, wherein the detected signal dependent upon the arterial blood volume of the limb is a pulsating component of a measured parameter, the measured parameter being dependent upon the blood volume in the limb.

4. (Previously Presented) A system as claimed in claim 3, wherein the calculation of the quantitative indicator is additionally dependent upon the ratio of a non-pulsating component of the measured parameter for the second posture to a non-pulsating component of the measured parameter for the first posture.

5. (Previously Presented) A system as claimed in claim 4, wherein the quantitative indicator is directly proportional to the ratio of the non-pulsating component of the measured parameter for the second posture to the non-pulsating component of the measured parameter for the first posture.

6. (Previously Presented) A system as claimed in claim 1, comprising at least one sensor configured to measure a parameter indicative of the blood volume of the limb when the subject is in a first posture and to measure the parameter when the subject is in a second posture and circuitry configured to isolate a pulsating component of the measured parameter.

7. (Previously Presented) A system as claimed in claim 1 wherein the limb is a foot.

8. (Previously Presented) A system as claimed in claim 1, wherein the position of the limb is changed between the first posture and the second posture.

9. (Previously Presented) A system as claimed in claim 1, wherein, in the first posture the limb is at a first elevation and in the second posture the limb is at a second elevation.

10. (Previously Presented) A system as claimed in claim 3, wherein the measured parameter is the intensity of light reflected from the limb and the ratio of the signal for the first posture to the signal for the second posture reduces subject dependent influences such as variable light absorption of the blood and tissue in the limb for different subjects.

11. **(Currently Amended)** A method for ~~assessing blood circulation in a limb of a subject,~~ producing a quantitative indicator that measures a response of a subject's blood circulation system to postural change comprising:

detecting a signal dependent upon an arterial blood volume in the limb of the subject when the subject is in a first posture prior to a postural change;

after a change in subject posture from the first posture to a second posture, different to the first posture, and during a response of the subject's blood circulation system to the postural

change, detecting [[a]] the signal dependent upon the arterial blood volume in the limb of the subject ~~when the subject is in a second posture, different to the first posture~~; and

using a processor to calculate a quantitative indicator that measures a response of the subject's blood circulation system to the postural change and is dependent upon a ratio of the detected signal for the first posture to the detected signal for the second posture.

12. (Previously Presented) A method as claimed in claim 11, further comprising:

measuring a parameter that is dependent upon the blood volume in the limb; and

isolating, as the signal, a pulsating component of the measured parameter.

13. (Previously Presented) A method as claimed in claim 12, further comprising:

isolating a non-pulsating component of the measured parameter, wherein the quantitative indicator is additionally dependent upon the ratio of the non-pulsating component of the measured parameter for the second posture to the non-pulsating component of the measured parameter for the first posture.

14. (Previously Presented) A method as claimed in claim 13, wherein the limb is a foot.

15. (Previously Presented) A method as claimed in claim 11, wherein the position of the limb is changed between the first posture and the second posture.

16. (Previously Presented) A method as claimed in claim 11 wherein, in the first posture the limb is at a first elevation and in the second posture the limb is at a second elevation.

17. (**Currently Amended**) A system for ~~assessing a peripheral blood circulation of a limb of a subject~~ producing a quantitative indicator that measures a response of a subject's peripheral blood circulation system to postural change, comprising:

a sensor configured to measure a parameter dependent upon a blood volume in the limb of the subject when the subject is in a first posture and ~~also when the subject is in~~ configured to measure the parameter dependent upon the blood volume in the limb of the subject

responsive to a change in the subject's posture from the first posture to a second posture, different to the first posture;

circuitry configured to separate the parameter into a first component and a second component; and

a processor configured to calculate a quantitative indicator that measures a response of the subject's peripheral blood circulation system to postural change wherein the calculation takes as inputs the first component of the measured parameter for the first posture, measured prior to the postural change, and the first component of the measured parameter for the second posture, measured after the postural change and during a response of the subject's peripheral blood circulation system to the postural change.

18: (Original) A system as claimed in claim 17, wherein the first component is a pulsating component and the second component is non-pulsating component.

19. (Previously Presented) A system as claimed in claim 17, wherein the quantitative indicator is dependent upon the ratio of the first component of the parameter for the first posture to the first component of the parameter for the second posture.

20. (Previously Presented) A system as claimed in claim 19, wherein the quantitative indicator is directly proportional to the ratio of the first component of the parameter for the first posture to the first component of the parameter for the second posture.

21. (Previously Presented) A system as claimed in claim 17, wherein the quantitative indicator is dependent upon the ratio of the second component of the parameter for the second posture to the second component of the parameter for the first posture.

22. **(Currently Amended)** A system as claimed in claim 21, wherein the quantitative indicator is directly proportional to the ratio of the second component of the parameter for the second posture to the second component of the parameter for the first posture.

23. (Previously Presented) A system as claimed in claim 17, wherein the measured parameter is intensity of light.

24-26. (Canceled).

27. **(Currently Amended)** A method ~~for assessing a peripheral blood circulation~~ for producing a quantitative indicator that measures a response of a subject's peripheral blood circulation system to postural change, comprising:

measuring a parameter dependent upon a blood volume in a limb of a subject when the subject is in a first posture and also when the subject is in a second posture, different to the first posture prior to a postural change;

separating the measured parameter, for the first posture, into a first component and a second component;

after a change in the subject's posture from the first posture to a second posture, different to the first posture, and during a response of the subject's peripheral blood circulation system to the postural change, measuring the parameter dependent upon the blood volume in the limb of the subject;

separating the measured parameter, for the second posture, into a first component and a second component; and

using a processor to calculate a quantitative indicator wherein the calculation takes as inputs the first component of the measured parameter for the first posture and the first component of the measured parameter for the second posture.

28. (Original) A method as claimed in claim 27, wherein the first component is a pulsating component and the second component is non-pulsating component.

29. **(Currently Amended)** A method as claimed in claim 27, wherein the quantitative indicator is dependent upon the ratio of the first component of the parameter for the first posture to the first component of the parameter for the second posture.

30-35. **(Canceled)**.

36-42. (Canceled).

43-44. **(Canceled)**.

45. **(New)** A system as claimed in claim 1, wherein the detected signal for the first posture prior to the postural change and the detected signal for the second posture after the postural change during a response of the subject's blood circulation system to the postural change, are separated in time by less than 60 seconds.

46. **(New)** A system as claimed in claim 1, wherein the detected signal for the second posture after the postural change during a response of the subject's blood circulation system to the postural change is less than 30 seconds after the posture change.

47. **(New)** A system as claimed in claim 1, further comprising a detector configured to detect postural change and provide a signal to the processing circuitry indicative of postural change.

48. **(New)** A method as claimed in claim 11, wherein the detected signal for the first posture prior to the postural change and the detected signal for the second posture after the postural change during a response of the subject's blood circulation system to the postural change, are separated in time by less than 60 seconds.

49. **(New)** A method as claimed in claim 11, wherein the detected signal for the second posture after the postural change during a response of the subject's blood circulation system to the postural change is less than 30 seconds after the posture change.

50. **(New)** A method as claimed in claim 11, further comprising using a detector to detect postural change and provide a signal to the processor indicative of postural change.

51. **(New)** A system as claimed in claim 17, wherein the measured parameter for the first posture, measured prior to the postural change, and the measured parameter for the second posture, measured after the postural change during a response of the subject's blood circulation system to the postural change, are measured with a separation of less than 60 seconds.

52. **(New)** A system as claimed in claim 17, wherein the measured parameter for the second posture, measured after the postural change during a response of the subject's blood circulation system to the postural change, is measured less than 30 seconds after the posture change.

53. **(New)** A system as claimed in claim 17, further comprising a detector configured to detect postural change and provide a signal to the processor indicative of postural change.

54. **(New)** A method as claimed in claim 27, wherein the measured parameter for the first posture, measured prior to the postural change, and the measured parameter for the second posture, measured after the postural change during a response of the subject's blood circulation system to the postural change, are measured with a separation of less than 60 seconds.

55. **(New)** A method as claimed in claim 27, wherein the measured parameter for the second posture, measured after the postural change during a response of the subject's blood circulation system to the postural change, is measured less than 30 seconds after the posture change.

56. **(New)** A method as claimed in claim 27, further comprising using a detector to detect postural change and provide a signal to the processor indicative of postural change.

57. **(New)** A system as claimed in claim 19, wherein the measured parameter is the intensity of red light and the quantitative indicator is indicative of skin tone color.

58. **(New)** A system as claimed in claim 17 further comprising:

an additional sensor configured to measure an additional parameter dependent upon the blood volume in a limb of the subject when the subject is in the first posture and also when the subject is in the second posture; and

circuitry configured to separate the additional parameter into first and second components;

wherein the processor is configured to calculate a quantitative indicator wherein the calculation takes as inputs not only the first component of the parameter for the first posture and the first component of the parameter for the second posture but also the first component of the additional parameter for the first posture and the first component of the additional parameter for the second posture.

59. **(New)** A system as claimed in claim 58, wherein the quantitative indicator is dependent upon the ratio of a modified first component of the parameter for the second posture to a modified first component of the parameter for the first posture,

wherein the modified first component of the parameter for the second posture is the first component of the parameter for the second posture divided by the sum of the first component of the parameter for the second posture and a first component of the additional parameter for the second posture and the modified first component of the parameter for the first posture is the first component of the parameter for the first posture divided by the sum of the first component of the parameter for the first posture and a first component of the additional parameter for the first posture.

60. **(New)** A system as claimed in claim 59, wherein the sensor configured to measure the parameter measures red light and the additional sensor configured to measure the additional parameter measures infrared light.

61. **(New)** A system as claimed in claim 17, wherein the first component is a pulsating component and the second component is a non-pulsating component.

62. **(New)** A system as claimed in claim 17, wherein the first component is a non-pulsating component and the second component is a pulsating component.

63. **(New)** A system for assessing a subject's peripheral blood circulation, comprising:

a first sensor configured to measure a first optical parameter dependent upon the blood volume in a limb of the subject when the subject is in a first posture and when the subject is in a second posture;

circuitry configured to separate the first optical parameter into components;

a second sensor configured to measure a second optical parameter dependent upon the blood volume in a limb of the subject when the subject is in a first posture and is in a second posture;

circuitry configured to separate the second optical parameter into components; and

processing circuitry configured to calculate the quantitative indicator wherein the processing circuitry takes as inputs the first and second components of the first optical parameter for the first posture, the first and second components of the first optical parameter for the second posture, the first and second components of the second optical parameter for the first posture and the first and second components of the second optical parameter for the second posture.

64. **(New)** A system as claimed in claim 63, wherein the first component is a first pulsating component and the second component is a second non-pulsating component.

65. **(New)** A system as claimed in claim 64, wherein the quantitative indicator is dependent upon the ratio of a modified first component of the first parameter for the second posture to a modified first component of the first parameter for the first posture,

wherein the modified first component of the first parameter for the second posture is the first component of the first parameter for the second posture divided by the sum of the first component of the first parameter for the second posture and a first component of the second parameter for the second posture and the modified first component of the first parameter for the first posture is the first component of the first parameter for the first posture divided by

the sum of the first component of the first parameter for the first posture and a first component of the second parameter for the first posture.

66. **(New)** A system as claimed in claim 64, wherein the quantitative indicator is dependent upon the ratio of a modified second component of the first parameter for the second posture to a modified second component of the first parameter for the first posture,

wherein the modified second component of the first parameter for the second posture is the second component of the first parameter for the second posture divided by the sum of the second component of the first parameter for the second posture and a second component of the second parameter for the second posture and the modified second component of the first parameter for the first posture is the second component of the first parameter for the first posture divided by the sum of the second component of the first parameter for the first posture and a second component of the second parameter for the first posture.

67. **(New)** A system as claimed in claim 66, wherein the first sensor measures red light and the second sensor measures infrared light.

68. **(New)** A method for assessing a subject's peripheral blood circulation, comprising:

measuring a first parameter dependent upon the blood volume in a limb of the subject when the subject is in a first posture and also in a second posture;

separating the first optical parameter into components;

measuring a second parameter dependent upon the blood volume in a limb of the subject when the subject is in a first posture and also in a second posture;

separating the second optical parameter into components; and

calculating a quantitative indicator using as inputs the first and second components of the first optical parameter for the first posture, the first and second components of the first optical parameter for the second posture, the first and second components of the second optical parameter for the first posture and the first and second components of the second optical parameter for the second posture.

69. **(New)** A system as claimed in claim 68, wherein the first component is a first pulsating component and the second component is a second non-pulsating component.

70. **(New)** A method as claimed in claim 68, wherein the quantitative indicator is dependent upon the ratio of a modified first component of the first parameter for the second posture to a modified first component of the first parameter for the first posture,

wherein the modified first component of the first parameter for the second posture is the first component of the first parameter for the second posture divided by the sum of the first component of the first parameter for the second posture and a first component of the second parameter for the second posture and the modified first component of the first parameter for the first posture is the first component of the first parameter for the first posture divided by the sum of the first component of the first parameter for the first posture and a first component of the second parameter for the first posture.

71. **(New)** A method as claimed in claim 68, wherein the quantitative indicator is dependent upon the ratio of a modified second component of the first parameter for the second posture to a modified second component of the first parameter for the first posture,

wherein the modified second component of the first parameter for the second posture is the second component of the first parameter for the second posture divided by the sum of the second component of the first parameter for the second posture and a second component of the second parameter for the second posture and the modified second component of the first parameter for the first posture is the second component of the first parameter for the first posture divided by the sum of the second component of the first parameter for the first posture and a second component of the second parameter for the first posture.

72. **(New)** A method as claimed in claim 71, wherein the first parameter is a measurement of red light and the second parameter is a measurement of infrared light.